



RESEARCH ARTICLE

Effect of different herbicides on weed growth and yield of garlic (*Allium sativum* L.)

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ARTICLE INFO

Received : 06.11.2012

Revised : 20.02.2013

Accepted : 18.03.2013

Key Words :

Weeds,
Herbicides,
Garlic

ABSTRACT

Field experiments were conducted on medium black soil to know the effect of different herbicides on growth and yield of garlic. The experiment was conducted with BLG-1 genotype. The experiment was laid out in Randomized Block Design with three replications having fifteen treatments each. The treatments consisted of six herbicides with two concentrations each along with two manual weeding treatments and an unweeded control. The cultural practices were practiced as per the package of practices of University of Agricultural Sciences, Dharwad. Significant differences were observed among the treatments for all the weed parameters at all the stages of observation. Among herbicides, chlorimuron @ 9 and 12 g a.i. ha⁻¹ recorded the least population of weeds (7.39 and 8.20, respectively) and was followed by chlomazone @ 1.0 and 1.5 kg a.i. ha⁻¹ (9.74 and 11.84, respectively). Application of chlorimuron @ 9 and 12 g a.i. ha⁻¹ recorded the lowest fresh weight (14.94 and 15.98 g, respectively) and dry weight (3.38 and 2.49 g, respectively) of weeds and was followed by application of chlomazone @ 1.0 and 1.5 kg a.i. ha⁻¹ (22.35 and 24.30 g of fresh weight and 4.56 and 5.70 g of dry weight, respectively). Yield of garlic bulbs varied significantly wherein application of Oxyfluorfen @ 0.10 g a.i. ha⁻¹ resulted in the production of highest yield (37.08 q/ha) and was on par with the application of Pendimethalin @ 1.0 kg a.i. ha⁻¹ (36.22 q/ha) followed by Oxyfluorfen @ 0.20 g a.i. ha⁻¹ (32.91 q/ha) and Pendimethalin @ 1.5 kg a.i. ha⁻¹ (31.31 q/ha). The lowest yield (14.79 q/ha) was recorded in the unweeded control.

How to view point the article : Shashidhar, T.R., Dharmatti, P.R., Anadi, C.C., Motagi, B.N. and Prashanth, S.J. (2013). Effect of different herbicides on weed growth and yield of garlic (*Allium sativum* L.). *Internat. J. Plant Protec.*, 6(1) : 118-121.

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INTRODUCTION

Garlic (*Allium sativum* L.) is one of the most important and widely consumed bulbous spice crops belonging to the family Alliaceae. It is grown for its bulbs throughout India. The bulbs can be consumed as a spice or condiment in the form of various processed products such as garlic paste,

pickles and in several food preparations like chutneys, curried vegetables, curry powders, meat preparations etc. Garlic is among the most ancient cultivated vegetables giving pungency. It is native of Central Asia and Southern Europe especially Mediterranean region. It is being grown in India and China in large areas.

In the course of crop production farmers face a lot of